Chemistry I: Matter

Introduction

Chemistry is defined as _____

_____

General Types of Chemistry

Pure Chemistry - _____

_____

Applied Chemistry- _____

_____

Kinds of Chemistry:

Analytical Chemistry is _____

_____

Physical Chemistry is _____

_____

Biochemistry is _____

_____

Organic Chemistry is _____

_____

Inorganic Chemistry is _____

_____

Matter

Matter is _____

_____

Mass is _____

_____

Volume is _____

_____

Law of Conservation of Matter and Energy_____

_____

_____

_____

Properties of Matter

Properties are_____

_____

_____

Two types of Properties are:

Physical properties_____

_____

_____

Examples of physical properties are_____

_____

_____

Chemical Properties_____

_____

_____

Examples of chemical properties are_____

_____

_____

Classification of Matter

1. Mixture- _____

   _____

a. Any substance that can be taken apart by _____

b. Two or more kinds of matter combined together where each kind of matter retains its _____properties.

2. Pure substance- any substance that cannot be taken apart by _____means (same stuff throughout)

3. Physical means – _____

_____

4. Homogeneous mixture (solution) _____

_____

5. Heterogeneous mixture _____

_____

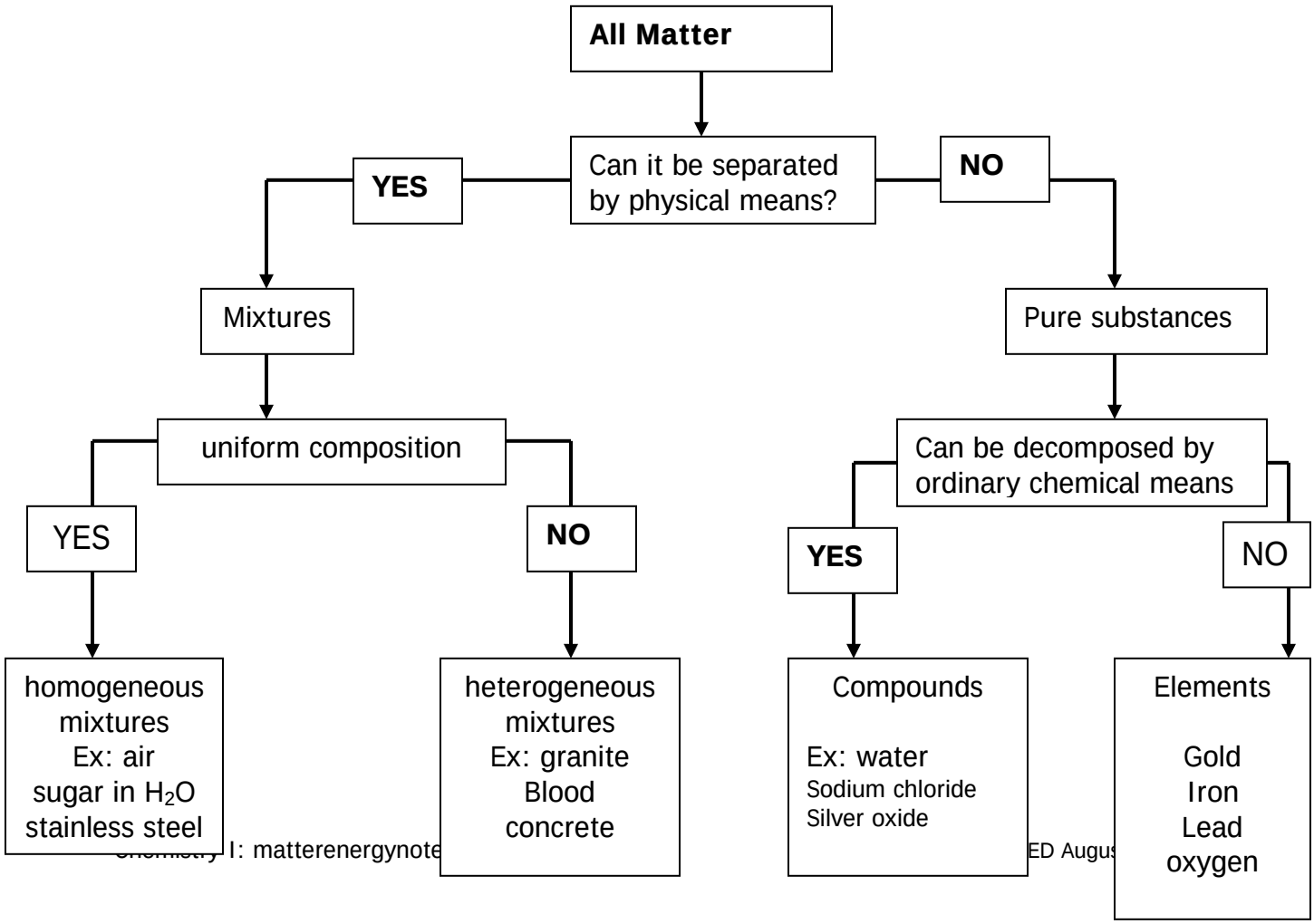
6. Compounds _____

_____

7. Elements- _____

_____

Classification of Matter



Changes in Matter

There are 2 general types:

1. Physical changes-_____

_____

2. Chemical changes-_____

_____

Now how do you tell the difference?

You pose the question:

Is a substance with completely different properties made doing this change?

If _____then a chemical change has occurred;

If _____then a physical change has occurred.

Examples:_____

_____

_____

Evidence of Chemical Changes

1._____
2._____
3._____
4._____
5._____
6._____

A precipitate is _____

Things that promote Chemical Change

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

A catalyst is _____

States of Matter

Solids	Liquids	Gases

The Modern Periodic Table

The known elements have been organized into a chart by _____

_____

_____

In 1951, _____ _____ was awarded the Nobel Prize in chemistry for his work on developing the Modern Periodic Table.

Element 106 has been named _____(Sg) in his honor.

Parts of the Periodic Table

Rows on the Periodic Table are called_____ or _____.

They are numbered_____.

The 112 elements can be divided into 9 separate families or groups.

The columns on the Periodic Table are called_____or_____.

The columns a numbered _____

The old system used Roman numerals and letters to denote groups and subgroups.

Metals

Elements in Groups _____and some under the stair step.

Non-Metals

Non-metals are the elements in Groups _____

The non-metals are in two states of matter at room temperature

1._____

2._____

Metalloids

- Metalloids are the elements found along _____

_____

_____

- This line is drawn from between _____and _____to the border between _____and_____.

▪Only exception to this is_____ which is considered to be an "other metal".

▪Metalloids have properties of both metals and non-metals.

▪Metalloids, such as_____ and_____, are semi-conductors. This property makes metalloids useful in computers and calculators

Noble Gases

The six Noble gases are found in Group _____

These elements are:_____

_____

The noble gases have great difficulty_____

Noble gases are the most_____

Classification of Elements

Metals	Nonmetals